



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------------|------------------|
| 10/606,850  | 06/26/2003  | Curtis A. Richardson | 89190.022003/DP309241        | 5766             |
| 22851   | 7590        | 11/27/2009           |                              |                  |
| Delphi Technologies, Inc.<br>M/C 480-410-202<br>PO BOX 5052<br>Troy, MI 48007 |             |                      | EXAMINER<br>MARTIN, ANGELA J |                  |
|   |             |                      | ART UNIT                     | PAPER NUMBER     |
|   |             |                      | 1795                         |                  |
|   |             |                      | MAIL DATE                    | DELIVERY MODE    |
|   |             |                      | 11/27/2009 PAPER             |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/606,850

**Applicant(s)**

RICHARDSON ET AL.

**Examiner**

ANGELA J. MARTIN

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/226)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to the Appeal Brief filed on August 31, 2009. However, a rejection having Simpkins as the primary reference prior to the RCE (filed 8/20/08) is presented for the following reasons of record.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpkins et al., U.S. Pat. Application Pub. 2003/0235723 A1, in view of Kenchington et al., U.S. Pat. No. 6,626,650 B1.

Rejection of claims 11-31 drawn to a fuel cell assembly.

Simpkins et al., teach a fuel cell assembly comprising a fuel cell stack, a supporting structure, and a gas spring disposed with the assembly (abstract) between the stack and supporting structure (Fig. 3), the spring including a first and second membranes (sect. 0033), means for sealing edges of the membranes to define a closed chamber for capture of gas (sect. 0033). It teaches a solid oxide fuel cell (sect. 0025-0027). Simpkins et al., do not teach a first and second valve means.

Kennington et al., teach a first (col. 8, lines 1-4) and second valve means (col. 13, lines 6-14) for fluid displacement (col. 3, lines 15-21), which may be used in a fuel cell system (col. 6, lines 4-9), and a gas spring disposed with the assembly (col. 3, lines 7-9). Regarding claims 30 and 31: It teaches a first valve positioned in the membrane for admitting gas to the chamber from exterior of gas spring (col. 3, lines 30-31). It teaches a second valve positioned in membrane for exhausting gas from chamber into exterior, the exterior is at a second pressure (col. 5, lines 38-41); the second pressure is ambient air pressure (col. 5, lines 38-41).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Kennington et al., into the teachings of Simpkins et al., because Kennington et al., teach that the first and second valve means allow gas to be expelled only when a pressure differential is established, which would prevent a portion of gas from leaking in an opposite direction from the flow of gas.

### ***Response to Arguments***

3. Applicant's arguments with respect to above claims have been considered but are moot in view of the ground(s) of rejection previously presented prior to the amendment of adding new claims 30 and 31. Claims 30 and 31 have been considered in this action. It appears that the previous rejection (Simpkins as a primary reference) could be employed in the rejection of claims 11-31, thus prosecution is reopened in this non-final rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA J. MARTIN whose telephone number is (571)272-1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM  
/Angela J. Martin/  
Examiner, Art Unit 1795